

MAY 11 2005

Amendments to the Specification:

Please replace the paragraph beginning on page 12, line 13, of the amended specification with the following rewritten paragraph:

-- The fingers of the RAKE receiver can be readjusted depending on the change in the transmission channel with the aid of an early and late tracking method (see: J.G. Proakis: "Digital Communications"; McGraw-Hill, Inc; 3rd Edition, 1995; Section 6.3) without having to carry out any further time-consuming and resource-intensive channel estimation. To do this, two additional fingers are, in each case, added to each RAKE finger as shown in Figure 6. The two fingers detect the received signal $r(t)$ with the same spread code $s(t)$ as the main finger, the only difference to the main finger being that the received signal in the early-late finger is advanced by one position, and that in the late-early finger is delayed by one sample position. This method can be used, in particular, in the case of oversampling. The energies collected from the early and late fingers are compared. The finger position of the main finger is shifted in the direction of the stronger finger after this comparison. This is done only when the energy difference exceeds a specific threshold value. The RAKE receiver is described in more detail in the cited literature (see: J.G. Proakis: "Digital Communications"; McGraw-Hill, Inc; 3rd Edition, 1995; Section 14.5). —

Please replace the paragraphs beginning on page 15, line 16, of the amended specification with the following rewritten paragraph:

-- Accordingly, the present invention is directed to a method wherein data which is received in the RAKE receiver and is read by an early-a late finger in the early-late tracking is buffer-stored and is passed on one read cycle later to a late-an early finger for reading by the same in the early-late tracking.

An idea on which the present invention is based is to make use of a characteristic which results from the ratio of the early and late data to one another. The data which is read by an early-a late finger is read one read cycle later by the corresponding late finger. It is thus sufficient to buffer-store data read by the early-late finger in a memory and to pass such data on appropriately to the late-early finger which then need no longer itself directly access the memory.

If no oversampling is used, then it is even possible to replace all three memory accesses by just one. If the early and the late finger share one memory access, the total number of memory accesses is reduced by 1/3. The use of slower and, thus, more cost-effective memory modules is hence possible. –

Please replace the paragraph beginning on page 16, line 15, of the amended specification with the following rewritten paragraph:

-- Figure 10 shows a circuit modified from that in Figure 9. Two of the three RAKE fingers, the main finger and the early-late finger, once again access the RAM memory SP via the multiplexer MUX independently of one another. Once again, the scrambling is reversed (descrambling) and a path weighting is carried out in a known manner using a number of multipliers MUL in the RAKE receiver. In the case of access by the early-late finger for the early-late tracking, the data read from the RAM memory SP is buffer-stored in a buffer store (register) ZSP, and is passed on one read cycle later to the late-early finger for reading by the same in the early-late tracking. –

Please replace the paragraph beginning on page 18, line 18, of the amended specification with the following rewritten paragraph:

-- The early-late and late-early fingers require the signal delayed by half a chip and the signal that arrived half a chip earlier, respectively. –

Please replace the paragraph beginning on page 19, line 12, of the amended specification with the following rewritten paragraph:

-- However, with this configuration, the memory location "15" is read in the second step, although it has already been used in the first step. One memory access per processing step is thus

sufficient for the early and late fingers. The value for the late-early finger is obtained by delaying the value for the early-late finger by one chip. Thus, if the early-late finger reads the value "4517", the output of the delay element for the late-early finger is first fed with the value "4715". However, this results in the correct sequence for the various fingers. -1